REMARKS

1. **Election/Restriction**

Applicant hereby confirms its provisional election, with traverse, of Claim Species A, directed to generic claim 1 and claims 2-6.

However, it is respectfully requested that the restriction requirement be favorably reconsidered and withdrawn. The present claims are all related to the same subject matter, and a search of the prior art when examining the apparatus covered by claims 2-6, which utilizes a sealed heat pipe, would, at the same time, result in a search of the prior art with respect to the apparatus of claims 7 and 8, which utilizes a thermosyphon heat pipe. To require the filing of a separate divisional application directed to the apparatus utilizing a thermosyphon heat pipe, as recited in claims 7 and 8, will result in the same search being repeated.

2. **Informalities in Specification**

Responsive to the Examiner's requirement that inconsistencies between the drawings and the specification be corrected, Applicant has amended the specification. Accordingly, it is submitted that the informality referenced by the Examiner has been overcome.

3. **Rejection of Claims as Anticipated Under 35 USC ¶ 102**

The Examiner has rejected Claims 1-6 under 35 U.S.C. ¶ 102(b) as anticipated by US Patent No. 5,667,758, to Matsugi ("Matsugi"). The Examiner bases this rejection on the conclusion that Matsugi incorporates a heat pipe heat transfer device (9) on the exterior wall of his reaction vessel. The Examiner further concludes that Matsugi's heat pipe heat transfer unit is a sealed heat pipe based on the depiction of element 9 in figures 1, 2 and 7-9. Applicant

respectfully traverses this rejection in that the heat transfer unit depicted as element 9 in Matsugi is not a heat pipe.

As described at page 3 of the specification of the instant application, a heat pipe is a special type of heat transfer device which utilizes the evaporation of a cooling fluid from a porous medium affixed to a heat transfer surface to absorb heat. The evaporation of the cooling fluid from the porous medium enjoys extremely high heat transfer coefficients and enables extremely high heat flux at essentially isothermal conditions. For a heat pipe to function, the heat transfer surface of the heat pipe must have a porous medium to which a heat transfer fluid is supplied by capillary action. In the present invention, the heat transfer device is equipped with porous surfaces at 41 a-d and 141 a-d. Further, there must be reservoirs of heat transfer fluid covering a portion of the porous medium to supply heat transfer fluid to the porous medium by capillary action. In the present invention, pools of heat transfer fluid 44 are provided for each heat pipe unit.

In contrast to the foregoing, the heat transfer device of Matsugi does not utilize evaporative cooling, does not have a porous medium covering heat transfer surfaces and does not have reservoirs of heat transfer fluid to provide coolant to the porous medium by capillary action.

According to Matsugi, a helical flow passage 9 (Col. 4; lines 55-57) is provided on a reaction vessel. This helical flow passage does not contain a porous medium and makes no provision for the supply of cooling fluid to a porous medium by capillary action and does not utilize high flux isothermal evaporative cooling. Accordingly, the reference relied upon by the Examiner fails to disclose or suggest the presently claimed invention.

For the foregoing reasons, it is submitted that the presently pending claims are allowable and early issuance of a Notice of Allowability with respect to the same is appropriate.

Further, since no reference relevant to generic claim 1 has been cited, it is respectfully submitted that it is allowable and that rejoinder dependent claims 7 and 8 is appropriate.

The Commissioner is hereby authorized to charge any fee deemed necessary for the entry of this Amendment to Deposit Account No. 50-0540.

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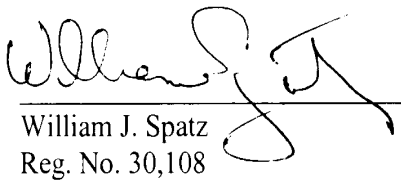
By: 

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